**Astronomy Ranking Task:**

**Apparent and Absolute Magnitude**

**Exercise #3**

**Description:** The figure below shows five stars (A - E) as they appear in the night sky from Earth. The absolute magnitude number is also provided to the right of each star.

![Stars](image)

**A. Ranking Instructions:** Rank the brightness (from greatest to least) of each star (A – E) as it appears in the night sky.

**Ranking Order:** Greatest 1 _______ 2 _______ 3 _______ 4 _______ 5 _______ Least

Or, the brightness of each star appears the same. ______ (indicate with check mark).

Carefully explain your reasoning for ranking this way:

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**B. Ranking Instructions:** Rank the total amount of energy (from greatest to least) given off by each star (A – E).

**Ranking Order:** Greatest 1 _______ 2 _______ 3 _______ 4 _______ 5 _______ Least

Or, the total amount of energy given off by each star would be the same. ______ (indicate with check mark).

Carefully explain your reasoning for ranking this way:

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C. Ranking Instructions: Rank the actual brightness or luminosity (from greatest to least) of each star (A – E).

**Ranking Order:** Greatest 1 _______ 2 _______ 3 _______ 4 _______ 5 _______ Least

Or, the actual brightness/luminosity of each star is the same. _____ (indicate with check mark).

**Carefully explain** your reasoning for ranking this way:
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D. Ranking Instructions: Rank the absolute magnitude number (from greatest to least) of each star (A – E).

**Ranking Order:** Greatest 1 _______ 2 _______ 3 _______ 4 _______ 5 _______ Least

Or, the absolute magnitude number of each star would be the same. _____ (indicate with check mark).

**Carefully explain** your reasoning for ranking this way:
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E. Ranking Instructions: Rank the distance (from farthest to closest) of each star (A – E) from Earth.

**Ranking Order:** Farthest 1 _______ 2 _______ 3 _______ 4 _______ 5 _______ Closest

Or, the distance from Earth to each star is the same. _____ (indicate with check mark).

**Carefully explain** your reasoning for ranking this way:
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